

WHAT IS CLAIMED IS:

1. An isolated nucleic acid molecule selected from the group consisting of:
 a) a nucleic acid comprising the nucleotide sequence of SEQ ID NO:1 or a full
 5 complement thereof; and
 b) a nucleic acid molecule which encodes a polypeptide comprising the amino acid
 sequence of SEQ ID NO:2.

2. The nucleic acid molecule of claim 1, further comprising a vector nucleic acid
 10 sequence.

3. The nucleic acid molecule of claim 1, further comprising a nucleic acid sequence
 encoding a heterologous polypeptide.

4. A host cell which contains the nucleic acid molecule of claim 1.

5. An isolated polypeptide comprising the amino acid sequence of SEQ ID NO:2.

6. The polypeptide of claim 5, further comprising heterologous amino acid
 20 sequences.

7. An antibody or antigen-binding fragment thereof that selectively binds to the
 polypeptide of claim 5.

8. A method for producing a polypeptide comprising the amino acid
 25 sequence of SEQ ID NO:2, the method comprising culturing the host cell of claim 4 under
 conditions in which the nucleic acid molecule is expressed.

9. A method for detecting the presence of the polypeptide of claim 5 in a sample, the method comprising:

a) contacting the sample with an antibody that selectively binds to the polypeptide; and

5 b) determining whether the compound binds to the polypeptide in the sample.

10. A kit comprising a compound that selectively binds to the polypeptide of claim 5 and instructions for use.

10 11. A method for detecting the presence of the nucleic acid molecule of claim 1 in a sample, the method comprising:

a) contacting the sample with a nucleic acid probe or primer that selectively hybridizes to the nucleic acid molecule; and

15 b) determining whether the nucleic acid probe or primer binds to a nucleic acid in the sample.

12. The method of claim 11, wherein the sample comprises mRNA molecules and is contacted with a nucleic acid probe.

20 13. A kit comprising a nucleic acid probe or primer that selectively hybridizes to the nucleic acid molecule of claim 1 and instructions for use.

14. A method for identifying a compound that binds to the polypeptide of claim 5, the method comprising:

25 a) contacting the polypeptide or a cell expressing the polypeptide with a test compound; and

b) determining whether the polypeptide binds to the test compound.

15. A method for modulating the activity of the polypeptide of claim 5, the method comprising contacting the polypeptide or a cell expressing the polypeptide with a compound that binds to the polypeptide in a sufficient concentration to modulate the activity of the polypeptide.

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16. A method of inhibiting aberrant activity of an 80091-expressing cell, comprising contacting the cell with a compound that modulates the activity or expression of the polypeptide of claim 5, in an amount that is effective to reduce or inhibit the aberrant activity of the cell.

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17. The method of claim 16, wherein the compound is selected from the group consisting of a peptide, a phosphopeptide, a small organic molecule, and an antibody.

18. The method of claim 16, wherein the 80091-expressing cell is an erythroid cell.

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19. A method of treating or preventing a disorder characterized by aberrant activity of an 80091-expressing cell, in a subject, the method comprising administering to the subject an effective amount of a compound that modulates the activity or expression of the nucleic acid molecule of claim 1, such that the aberrant activity of the 80091-expressing cell is reduced or inhibited.

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20. The method of claim 19, wherein the 80091-expressing cell is an erythroid cell.